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|--|-------------|----------------------|-----------------------------|------------------|
| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
| 10/646,429   | 08/22/2003  | Robert L. Billmers   | 3043.FDI                    | 9142             |
| 7590 04/23/2007<br>Karen G. Kaiser<br>NATIONAL STARCH AND CHEMICAL COMPANY<br>10 Finderne Avenue<br>Bridgewater, NJ 08807-0500 |             |                      | EXAMINER<br>TRAN LIEN, THUY |                  |
|  |             |                      | ART UNIT                    | PAPER NUMBER     |
|  |             |                      | 1761                        |                  |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | MAIL DATE            | DELIVERY MODE               |                  |
| 3 MONTHS   |             | 04/23/2007           | PAPER                       |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/646,429

Applicant(s)

BILLMERS ET AL.

Examiner

Lien T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The 112 second paragraph rejection is hereby withdrawn.

Claims 1,9,10,11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Bell et al.

Bell et al disclose a fried composition comprising a food portion and a batter containing starch that has been cross-linked with succinic anhydride. The batter adheres directly on the food portion. The food portion includes chicken, fish, fruit etc.. ( see col. 2 lines 20-25, col. 3 line 14, col. 7 lines 15-20, col. 8 lines 13-14).

Bell et al disclose coating food composition with starch succinate; thus, it is inherent the food will have the claimed reduction of fat content as claimed.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al in view of Richards et al.

Bell et al do not teaching converting the starch, the water fluidity and the amount of succinic anhydride.

Richards et al teach a method of making lipophilic starch derivative for use at coating material. The process includes the steps of esterification of the starch with n-octenyl succinic anhydride. The amount of anhydride used is generally from about .1-10%. The esterified starch is converted by enzyme treatment to decrease the viscosity of the starch suspension. ( see col. 2 lines 60-68, col. 3 lines 30-40)

It would have been obvious to one skilled in the art to convert the starch in the Bell et al process as taught by Richards et al when desiring to obtain a starch suspension having low viscosity. For example, when desiring only a thin film of starch on the food portion instead on thicker layer of a batter, it would have been obvious to

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have a starch suspension with low viscosity. The amount of water fluidity depends on the viscosity desired and this is a result-effective variable which can readily be determined by one skilled in the art. It would have been obvious to vary the amount of succinic anhydride depending on the degree of cross-linking desired. Since the starch is used for coating, it would have been obvious to one skilled in the art to follow the guide line in the amount used as taught by Richards et al.

Claims 8, 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al in view of Wu et al.

Bell et al do not disclose potato product, adding another starch and the processing steps as in claims 14 and 20.

Wu et al disclose a process for coating potato strips. The process includes the steps of blanching the potato, treating the potato in sodium chloride solution, and coating the potato with starch solution. Wu et al teach adding different type of starch in addition to the main starch component. ( see col. 3 and col. 5 lines 63-67)

Bell et al disclose other products can be coated; thus, it would have been obvious to coat potato product when desiring crisp coating on such product. When the food product being coated, it would have been obvious to one skilled in the art to process the potato according to conventional method as disclosed by Wu et al. It would also have been obvious to add another starch to the batter of Bell et al to obtain different flavor, texture, viscosity etc.. Adding combination of starches in coating composition is known as shown by Wu et al. It would have been obvious to one skilled in the art to determine the appropriate amount of cation to obtain the most optimum

product. This can readily be determined through routine experimentation. It would have been obvious to add the starch to the blanching water when the food portion is treated in the blanching water because this will save a separate coating step. Blanching the food in the water will cause any component in the water to adhere to the food. It would have been obvious to reconstituting the product by frying or oven heating depending on the texture desired. Frying will give a crispier texture.

Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi et al ( US2003/0099744).

Shi et al disclose a food composition comprising a food portion and a coating comprising starch succinate that is converted. The starch can be a pregelatinized starch. ( see paragraphs 0015, 0017, 0024, 0040)

Shi et al do not disclose the food composition is a fried composition.

It would have been obvious to one skilled in the art to make a fried composition when wanting food having different texture and flavor. Both baking and frying are well known cooking process in the art and the selection of which depends on the fat content, calorie content, taste, texture, flavor etc.. wanted.

In the response filed 2/12/07, applicant argues the starch succinates claimed are not crosslinked, but half esters formed by the reaction of starch with succinic anhydride. There is nothing in the claims about how the starch succinate is formed or whether it is a half-ester; thus, such issue is not under consideration. The starch in Bell et al is reacted with succinic anyhydride which reacts with at least two available hydroxyl groups of the starch molecule. Thus, the starch is a starch succinate. There is nothing

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in the claims to distinguish the starch succinate from that disclosed in Bell et al. With respect to the Richards et al reference, applicant argues there is no motivation to substitute the starch with that of Richards because one would not add a lipophilic substance to reduce the fat content of a composition to be fried. This argument is not persuasive because it is not supported by factual evidence. Applicant does not providing any evidence for why one would not substitute the starch. Furthermore, it is not proposed in the rejection to substitute the starch to reduce the fat content.

Applicant further argues Wu teaches crosslinked starches and therefore does not cure the deficiency. The Wu reference is relied upon to show conventional technique in processing potato; it is not relied upon to show the starch claimed. As to adding cation to the blanching water, Wu teaches treating the potato with cation. It would have been obvious to add this cation to the blanching water to save a separating treating step. The same position is taken with adding additional starch to the blanching water. Applicant has not argues why this would not have been obvious.

With respect to the Shi reference, applicant argues one skilled in the art does not fry a glaze. This argument is not persuasive because there is no position set forth to fry a glaze. The glaze in Shi et al is applied to a food product which is then subsequently processed. It would have been obvious to fry the food product if one wants the taste and flavor of fried food.

Applicant's arguments filed 2/12/07 have been fully considered but they are not persuasive.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lien T. Tran whose telephone number is 571-272-1408. The examiner can normally be reached on Monday, Wed-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cano Milton can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 20, 2007

*Lien Tran*  
LIEN TRAN  
PRIMARY EXAMINER  
*Group 1702*